

DIGITAL SUBSCRIBER LINE COMMUNICATING SYSTEM  
AND A TRANSCEIVER IN THE SYSTEM

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ABSTRACT OF THE DISCLOSURE

10 A digital subscriber line communicating system and a  
transceiver therein are disclosed. The system or the  
transceiver comprises: a unit for calculating a bitmap  
which defines the number of transmissible bits for each  
carrier signal in each of periodical noise durations and  
a rate converter for converting a constant rate of an  
15 input transmitting data into a rate determined by the  
bitmap, and for adding, in a predetermined number of the  
periodical noise durations, dummy bits to the data having  
the converted rate. The bitmap calculating unit  
includes: a line quality measuring unit for measuring  
20 the quality of the communication line in each of the  
periodical noise durations, a transmission bit number  
converter for calculating the number of transmissible  
bits to be allocated to each carrier to form the bitmap,  
and a bitmap optimizing unit for minimizing the dummy  
25 bits by decreasing the number of the transmissible bits  
allocated to each carrier signal of the symbols. The  
decreasing is performed in the order from the number of  
bits allocated to a carrier with a smaller S/N margin to  
the number of bits allocated to a carrier with a larger  
30 S/N margin.